

JAnthony, Karen (DNREC)

From: Sam Ghezavat <Sam.Ghezavat@bloomenergy.com>
Sent: Tuesday, July 29, 2014 7:25 PM
To: JAnthony, Karen (DNREC)
Subject: RE: Hazardous Waste Determination - Delaware Sulfur Handling Question

Dear Karen J'Anthony,

I am writing in response to the questions your department has asked our public affairs manager, Mr. Bryan Horsey. I apologize for the delay. Please see the response to Bryan's questions on your behalf below:

Delaware Department for Natural Resources is requiring a determination/classification to be made regarding the handling of our natural gas desulfurization containers. Specifically:

1. Once the containers are spent, do they qualify as solid waste? Yes, the spent desulfurization material is spent waste and is considered solid waste
 - a. If they do qualify as solid waste, do they qualify as hazardous waste? Once they are received at our Texas Desulfurization Consolidation Center and are extracted from the canisters, some of the mixture material is characterized as Hazardous Waste and Some of the mixture is reclaimed. The Desulfurization Consolidation Center has an EPA Id number and is authorized by Texas Commission on Environmental Quality (TCEQ) to handle, store hazardous materials. The hazardous materials portion is then transferred to Clean Harbors, a licensed and authorized RCRA and TSCA site located La Porte, Texas at their Deer Park Incineration/Landfill facility.

DNREC is asking Bloom to submit:

- a. the contact information for the designated facility managing the spent sorbents: Timothy McKinney at Unicat Catalyst Services. Alvin, Texas, 77511. (EPA ID TXR000081631)
- b. the management method of the same: Bloom Energy requires the Clean Harbors to participate in a waste-to-Energy and recycle/reclaim schemes. Some of the spent materials are heated to release potential VOC's and then crushed to powder and landfilled. Some spent material is reclaimed for copper and some are used/blended in cement manufacturing.
- c. the physical properties of the spent waste, along with any analytical data used in concluding the spent sorbents do not meet the definition of hazardous waste as set forth in Delaware's *Regulations Governing Hazardous Waste*. (Bloom Energy Has determine the spent materials to be Hazardous Waste)

on behalf of Bloom Energy, I thank you for the time and questions. Please do not hesitate to contact me if there are additional questions.

Best regards;

Sam Ghezavat, JD, CSP,ALCM,ARM,CFPS
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